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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/868,221
Filing Date: June 15, 2001
Appellant(s): TITMUSS ET AL.

Attorney Raymond Y. Mah (Reg. No. 41,426)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07/02/07 appealing from the Office action mailed 11/30/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Zhao et al., "Flexible Network Support for Mobility", ACM/IEEE, Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998

6,553,410 KIKINIS 4-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5, 9, 10, 15, and 17-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Zhao et al. ("Flexible Network Support for Mobility", ACM/IEEE,

Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998), hereinafter referred to as Zhao.

Regarding claims 1, 9, 10, and 15, Zhao disclosed a method and system comprising sending a data stream from a correspondent host to a home agent located in the home network of a mobile terminal (see Abstract; section 2), the mobile terminal sending a request for the data stream to be transmitted by the correspondent host (see section 3.1) and the mobile terminal communicating with the home agent to transmit the network location of the mobile terminal to the home agent (see sections 5.3.1, 5.3.2); and forwarding the one or more data streams to the mobile terminal, wherein the mobile terminal sends to the home agent information about the type of networks to which the mobile terminal is currently connected, the available bandwidth for each type of network to which the mobile terminal is currently connected, and the mobile host's care-of address applicable for each type of network to which the mobile terminal is currently connected, the home agent selecting an appropriate network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is currently connected (see sections 5.3.1-5.3.2 and 9; Figure 6, Figure 7, Figure 8).

Regarding claim 2, Zhao disclosed the method and system wherein in response to a change in the information about the current availability received by the home agent at least one of the data streams is forwarded by the home agent to a network cache, said at least one of the data streams being stored in the network cache until the home

agent forwards said at least one of the data streams to the mobile terminal (see section 4.3).

Regarding claim 3, Zhao disclosed the method and system wherein the request sent by the mobile terminal to the correspondent host is sent via the home agent (see section 3.2).

Regarding claim 4, Zhao disclosed the method and system wherein all communication from the home agent to the mobile terminal is routed via a foreign agent, the foreign agent being located in a subnetwork to which the mobile terminal is connected (see section 2).

Regarding claim 5, Zhao disclosed the method and system wherein all communication from the mobile terminal to the home agent is routed via a foreign agent, the foreign agent being located in a subnetwork to which the mobile terminal is connected (see section 2).

Regarding claims 17-20, Zhao disclosed the method and system wherein the mobile host selects an appropriate network and its applicable care-of address by comparing the bandwidths of different types of networks to which the mobile host is selected (see section 5.1 and 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al. ("Flexible Network Support for Mobility", ACM/IEEE, Proceedings of the Mobile Computing and Networking (MobiCom), p. 145-156, Dallas, TX, Oct 1998), hereinafter referred to as Zhao, and further in view of Kikinis (U.S. Pat. No. 6,553,410).

Zhao disclosed a method of transmitting data to a mobile client having multiple network connections. The invention utilized Mobile IP (see Abstract), where it was disclosed that a correspondent host could transmit data to a mobile terminal. The data was first intercepted by a home agent, which then forwarded it to a mobile terminal (see section 2). Zhao disclosed that a mobile device could request the data, such as in a web transfer (see section 3.1). The mobile terminal sent location updates to the home agent (see sections 5.3.1, 5.3.2). Based on such connectivity data, the home agent forwarded the requested data from the correspondent host to the mobile terminal (see section 2).

While disclosing the possibility of a home agent receiving a change in connectivity data, Zhao did not specifically disclose reducing content forwarded to a mobile terminal, wherein the reduction further comprises conversion of the data to a lower resolution.

In a related art of network data communications, Kikinis disclosed a method and system for providing improved data transmission to computer connected to a network. In particular, Kikinis disclosed the invention in the context of portable (i.e., mobile) devices (see column 5, lines 36-49). Similar to the invention of Zhao, Kikinis disclosed

that a mobile terminal could request web data over a network (see column 10, line 64 through column 11, line 11). A mobile terminal provided connectivity data to a proxy server, which in turn used the data to tailor content forwarded to the mobile terminal (see column 12, lines 11-26). The tailored data was in reduced form (see column 3, lines 8-18). Furthermore, the tailored data could be of lower resolution than the original (see column 8, lines 15-28; column 11, lines 22-28).

It would have been obvious to one or ordinary skill in the art at the time of invention to combine the teachings of Zhao and Kikinis to incorporate the provision of forwarding a reduced-content version of data to the mobile terminal, wherein the reduction comprised a conversion to the data to a lower resolution. The invention of Zhao related to the use of mobile terminals, which included light-weight, portable computers and laptops (see Abstract, Figure 9). With such devices, Kikinis recognized a problem of battery life (see column 2, lines 16-60). One of ordinary skill in the art then would have been motivated to consider the teachings of Kikinis as they proved advantageous when used with such portable devices, giving the added benefit of increased battery life and saved power (see column 5, lines 56-65).

(10) Response to Argument

The Appellant argued in substance that:

Issue 1: Zhao fails to disclose "wherein the mobile terminal sends to the home agent information about the types of networks to which the mobile terminal is currently connected, the available bandwidth for each type of network to which the mobile

terminal is currently connected, and the mobile host's care-of address applicable to each type of network to which the mobile terminal is currently connected, the home agent selecting an appropriate network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is currently connected" as recited in independent claim 1.

Specifically, Appellant argues that Zhao is in contrast to the concept of the home agent selecting a network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is connected. Examiner submits however that Zhao's reads upon this broad concept as claimed. Clearly, the home agent of Zhao receives both network (i.e., "interface") information and a care-of address from the mobile agent as claimed, as Zhao disclosed a mechanism "to control the selection of the most desirable network interfaces for both outgoing and incoming packets for different traffic flows" (see Abstract), using a binding that "specifies the mobile host's care-of address(es) that the home agent should use to forward packets belonging to the flow" (see section 5.3.1).

In addition to this, Zhao disclosed "automatically selecting the most suitable interface to use for each flow according to the QoS specified" (see section 9). Zhao disclosed that QoS involved, as one of ordinary skill in the art would recognize, bandwidth considerations (see section 5.1). Selection of an interface based on requested QoS requirements would therefore also be based on bandwidth considerations. Zhao also disclosed providing "mobility-aware applications with an API to specify their QoS requirements instead of requiring them to bind flows explicitly to

specific interfaces" (see section 9). Clearly, the ability of the mobility-aware applications (i.e., mobile terminals) to specify QoS requirements would include a provision to send the home agent information about the bandwidth of the networks it is connected to since QoS involved bandwidth considerations (see section 5.1). As such, the disclosure of Zhao allowing for interface selection to be based on a requested QoS reads on the broad concept of a home agent selecting a network and care-of address based on the available bandwidth for each network a mobile terminal is connected as claimed. While Appellant argues that Zhao discloses a mobile host instructing a home agent which network to use, whereas the claimed invention enables a home agent to select a network from information relating to available bandwidth of each type of network to which a mobile terminal is connected, Examiner notes that such a provision is taught by Zhao. Zhao disclosed selection of a network among several networks by the home agent (see Fig. 5), the selection made "by the home agent in determining the most appropriate interfaces through which to forward packets addressed to a mobile host" (see Section 8). Zhao further disclosed that such selection was made through selection of a proper binding at the home agent ("locate an entry for the mobile host in the mobility binding table on the home agent", see Section 6.3), the bindings of which related to QoS considerations as argued above. And finally, as argued above, since Zhao discloses QoS considerations to include bandwidth considerations, the selection of a network by a home agent based on a binding as in Zhao is related to QoS/bandwidth considerations, which reads on the claim limitation argued by Appellant. Examiner submits that the breadth of the claims allows for such an interpretation, as

"the home agent selecting an appropriate network...based on the available bandwidth" does not explicitly recite how such a selection is made, or how such selection is specifically based on the bandwidth.

Furthermore, in response to Appellant's argument that the references fail to show certain features of the invention, it is noted that the features upon which Appellant relies (i.e., the lack of Zhao to suggest or result in cheaper terminals with lower power consumption [see Argument, p. 16]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Such a result of the present invention as argued by Appellant is thus irrelevant to the argument as it is not recited in the claims.

Finally, regarding Appellant's citation of Nobel et al., although Appellant characterizes the teachings of Nobel as lacking in its discussion on selection of a network associated with bandwidth, Examiner submits that such a feature is taught by Zhao as detailed in the above rejection and argued above.

For these reasons, claims 1-5, 9, 10, 15, and 17-20 are rejected.

Issue 2: Zhao in view of Kikinis does not teach "wherein the mobile terminal sends to the home agent information about the types of networks to which the mobile terminal is currently connected, the available bandwidth for each type of network to which the mobile terminal is currently connected, and the mobile host's care-of address applicable to each type of network to which the mobile terminal is currently connected,

the home agent selecting an appropriate network and its applicable care-of address based on the available bandwidth for each type of network to which the mobile terminal is currently connected" as recited in independent claim 1.

As argued above, Examiner submits that Zhao teaches the limitation as claimed. Furthermore, Kikinis was not relied upon for the rejection of this limitation in claim 1, but instead for the rejection of dependent claims 6 and 7. In light of Appellant's argument, for the same reasons detailed above, claims 6 and 7 are rejected.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Joseph Manfwang

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